Agenda
Utah Board of Water Resources
Board Briefing Meeting

October 10, 2019
Department of Natural Resources
Room 314
1594 West North Temple, Salt Lake City, Utah
10:00 am

I. WELCOME/CHAIR'S REPORT
*Chair Norman Johnson

II. DISCUSSION OF BOARD AGENDA ITEMS
(See Board Meeting Agenda)

III. INFORMATION TO THE BOARD

IV. OTHER ITEMS

Agenda
Utah Board of Water Resources
Board Meeting

October 10, 2019
Department of Natural Resources
Auditorium
1594 West North Temple, Salt Lake City, Utah
1:00 PM

I. CALL TO ORDER

II. APPROVAL OF MINUTES - August 8, 2019

Proj. No.	Applicant	County	Proj. Manager
III. FEASIBILITY REPORTS:			
RE430	Weber Basin Water Conservancy District	Davis	Ben
RL586	Pleasant Grove City	Utah	Marisa
IV. COMMITTAL OF FUNDS:			
RE418	Mapleton Irrigation Company	Utah	Marisa
RE421	West Cache Irrigation Company	Cache	Russell
V. **SPECIAL ITEMS:**			
RE429	Cove Water Works (Authorization & Committal)	Cache	Tom
RE395	Burns Bench Irrigation Company (Reauth. & Comm.)	Uintah	Jaqueline
RE308	Summit Creek Irrigation Company (Deferred Pmt)	Utah	Ben
RE374	Mosby Irrigation Company (Withdrawal)	Uintah	Tom
RC055	Center Creek Irrigation Company (Additional Funds)	Wasatch	Russell
VI. NEW APPLICATIONS:			
RL587	Millville City	Cache	Jaqueline

VII. LAKE POWELL PIPELINE REPORT

*Joel Williams

VIII. CLOUD SEEDING REPORT

*Jake Serago

IX. PLANNING REPORT

*Jake Serago

X. DIRECTOR'S REPORT

BOARD OF WATER RESOURCES

Feasibility Report

Applicant: **Weber Basin Water Conservancy District**

Project Number: RE430

Fund: Conservation and Development Fund

Cost Estimate: $3,581,000

Application Received: 8/1/2019

Board Meeting Date: 10/10/2019

Board Member: Kyle Stephens

Project Manager: Ben Marett

Project Summary: The purpose of the project is to install 2,850 secondary meters in West Bountiful and Woods Cross.

Recommendation: Staff recommends the board authorize 70.8% of the project cost, up to $2,534,000, and that the bonded indebtedness be returned at 1.0% interest over 15 years with annual payments of approximately $196,000 (including reserves).

Project Contacts:

Primary Contact:
Ashley Nay
2837 E. Highway 193
Layton, UT 84040
801-771-4380

President:
Paul Summers
2837 E. Highway 193
Layton, UT 84040
801-771-1677

District Engineer:
Zack Woffard
2837 E. Highway 193
Layton, UT 84040
801-771-7677

Location
The proposed project is located in West Bountiful and Woods Cross in Davis County.

Introduction & Background
In 1949, Congress authorized the Weber Basin Project with the intent to develop water resources in the Weber River Basin under the authority of the U.S. Bureau of Reclamation. Weber Basin Water Conservancy District (WBWCD) was created in 1950 to act as the operating agency for the Weber Basin Project. Today, WBWCD is one of Utah's largest secondary water retailers. It provides wholesale water to many retail water agencies across the Wasatch Front including Centerville, Farmington, Layton, Uintah Bench, South Ogden, Ogden, Washington Terrace, West Bountiful, West Haven, and Woods Cross.

Water is diverted for use from many sources within the area. The primary source of water for WBWCD is the Weber River. Other sources include tributaries to the Great Salt Lake located on the western slope of the Wasatch Mountain Range and a series of wells which draw water from local aquifers.

WBWCD is the direct secondary water provider to approximately 18,000 connections throughout Davis and Weber Counties. In an effort to reach Governor Herbert's goal of 25% water reduction by 2025, WBWCD began installing secondary water meters in 2008. To date, about 7,000 secondary water meters have been installed.

Existing Conditions & Problems
Secondary water connections are a valuable asset to the residents they serve. Previously, there hasn't been any way for residents to accurately determine their water usage. Knowing how much water is being used is a valuable tool in the effort to consume less water.

WBWCD operates twenty one wells used to supplement water supplies for the project area. These wells have historically been used to mitigate water shortages when water scarcity occurs. Using groundwater at a faster rate than it can be replaced results in aquifer depletion which can have irreversible, far-reaching, adverse consequences.

Population within the district's service area is expected to nearly double from 2010 to 2060. As of 2016, WBWCD had existing contracts for 83% of its reliable yield supply. Water conservation will play an essential role in WBWCD's ability to adequately provide water in the future.

Proposed Project
The proposed project includes installation of 2,850 secondary water meters in West Bountiful and Woods Cross. Installation of the meters is expected to take place over the course of 24 to 36 months. Construction will be limited to fall and spring months and is expected to take place between September 2020 and April 2022.

Benefits
In other areas where WBWCD has previously installed water meters, substantial decreases in water usage have been realized. As water meters are installed in Bountiful and Woods Cross, and as residents are made aware of the discrepancy between needed water and actual water used, similar results are expected to occur.

Decreased water use is expected to increase the sustainability of the aquifer below the Bountiful and Woods Cross area through reduced water pumping. Slowing aquifer depletion is expected to partially mitigate potential for future conflict.

Because water conservation will reduce the demand for supplemental well water, WBWCD will consume less power in well pumps. WBWCD expects to decrease energy usage by approximately 64,690 kW-hrs per year.

Cost Estimate

The following cost estimate is based on the District engineer's preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	1" End User Secondary Meter	2,850	EA	$1,142	$3,255,000
				Construction Cost	**$3,255,000**
				Contingency	$163,000
				Design & Construction Engineering	0
				Legal and Administrative	163,000
				TOTAL	**$3,581,000**

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board Share	$2,534,000	70.8%
Applicant Share	447,000	12.5
WaterSMART	600,000	16.7
TOTAL	**$3,581,000**	**100.0%**

WBWCD applied for three WaterSMART grants and was awarded two of them. Each of the two WaterSMART grants is equal to $300,000 for a total of $600,000. An environmental impact document will be prepared prior to construction.

Staff recommends the board authorize 70.8% of the project cost, up to $2,534,000, and that the bonded indebtedness be returned at 1.0% interest over 15 years with annual payments of approximately $196,000 (including reserves).

Economic Feasibility

It is in the best interests of the state to require all water to be metered. No alternative to the proposed project will obtain this goal; therefore, the benefit/cost ratio for the metering project is assumed to be 1.0.

Financial Feasibility

Based on the board's guidelines, the residents of Bountiful and Woods Cross can afford to pay approximately $68.61 per month for all water. The cost of the proposed project will be repaid from WBWCD's operation and maintenance budget. Rate increases are adjusted annually to compensate for O&M and other needs of the water district. As a result, the billing of WBWCD's customers in the West Bountiful and Woods Cross areas are not expected to increase as a direct result of the proposed project.

Water Rights & Supply

The applicant owns numerous water rights which allow them to use water from the Weber River Basin consistent with the Weber Basin Project. Change application A24880 (25.0 cfs) was submitted by WBWCD with the intent to provide water for current and projected needs for multiple cities located in southern Davis County. Currently, three wells are drawing water under authority of this change application. Multiple points of diversion have been identified for future groundwater exploration and development of the remaining water under these water rights.

Easements

No additional easements beyond those already held by WBWCD will be needed for the proposed project.

Environmental

Because the project was awarded federal funds in the form of WaterSMART grants, an environmental impact document will be required before federal funds will be available. It is anticipated that the project will receive a categorical exclusion due to the fact that the entire project will take place in previously impacted areas and existing road alignments.

No adverse environmental impacts are expected to occur from the proposed project. In terms of water conservation, this project is expected to benefit the natural system from which water is sourced; namely, the Weber River and the Sunset Aquifer.

Water Conservation

It is difficult to estimate the degree to which residents will choose to conserve water after they are made aware of their consumption. However, significant water savings have been realized in other sections of WBWCD's system after secondary water meters were installed and water use information was provided to users. Assuming that water conservation in West Bountiful and Woods Cross will be similar to that realized in other areas, it is estimated that the proposed project will result in water savings of approximately 1,133 acre-feet annually.

Applicant's Responsibilities

The applicant will be required to make all arrangements to sell the board a non-voted revenue bond, as well as verify it has adequate water rights and rights-of-way to construct the project. If the project is authorized, a full list of requirements and procedures necessary to close the bond will be furnished to the applicant

Applicant: **Pleasant Grove City**

Project Number: RL586

Fund: Cities Water Loan Fund

Cost Estimate: $2,500,000

Application Received: 8/13/2019

Board Meeting Date: 10/10/2019

Board Member: Wayne Andersen

Project Manager: Marisa Egbert

Project Summary: The purpose of the project is to upgrade or add source screening and filtration to the City's existing secondary irrigation system. This will include three filtering stations within existing CUWCD turnout vaults; one above ground filtering building, and two screen structure modifications.

Recommendation: Staff recommends the board authorize 72.0% of the project cost, up to $1,800,000, and that the bonded indebtedness be returned at 1.0% interest over 25 years with annual payments of approximately $95,000 (including reserves).

Project Contacts:

Mayor:
Guy Fugal
86 South 100 East
Pleasant Grove 84062
801-785-5045

Finance Director:
Denise Roy
86 South 100 East
Pleasant Grove
84062
801-785-5045

City Engineer:
Marty Beaumont, P.E.
86 South 100 East
Pleasant Grove
84062
801-785-2941

Consulting Engineer:
John Schiess, P.E.
Horrocks Engineers
2162 West Grove Parkway
Suite 400
Pleasant Grove 84062

Location
The proposed project is located on the east side of Pleasant Grove in Utah County.

Introduction & Background
The city provides culinary water to approximately 8,800 connections (about 8,300 residential connections). The city also provides secondary water through a pressurized irrigation system to more than 7,000 connections. The secondary system is fed primarily from water delivered from six irrigation companies. The city also has three wells that are used as needed. The city delivers the water through more than 100 miles of pipeline with just under 14 million gallons of storage in two tanks and one reservoir.

The city has received financial assistance from the Board for four projects – one through traditional funding and three through bond insurance grants. The repayment of the funded project was completed in 2018.

Existing Conditions & Problems
The existing filters and screens on the secondary system have not been able to adequately clean the water prior to delivery. When the filters and screens get overloaded, that part of the delivery system is shut down until they are cleaned. Additionally, the customers regularly have plugged connection filters and sprinklers. The water can cover lawn and gardens with sediment. Clogging occurs in high and low runoff seasons. When there are high runoff years, there is a lot of sediment in the water. When there are low runoff years, the system clogs from algae growth.

The City Council has directed the City Engineer's office to upgrade the existing system to reduce the issues.

Proposed Project
The purpose of the project is to upgrade screening and filtration within the City's existing secondary irrigation system. This will include three filtering stations within existing CUWCD turnout vaults; one above ground filtering building, and two screen structure modifications. Two diversion structures will be modified and the metering and telemetry systems will be upgraded.

Benefits
The project is expected to reduce staff time to clean out screens and filters, increase the reliability of the irrigation system delivery, and reduce customer complaints and labor for plugged irrigation systems. The project is also expected to provide cleaner water at the customer level, improving irrigation efficiency and reducing sediment on lawns and gardens.

Cost Estimate
The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization	1	LS	$100,000	$100,000
2	CUP Vault Filter/Piping	3	EA	300,000	900,000
3	CUP Vault Electrical/Mechanical	3	EA	75,000	225,000
	Battle Creek Upgrades				
4	Stream Diversion Modifications	1	LS	200,000	200,000
5	PI Screen/Strainer Modifications	1	LS	35,000	35,000
6	PI Flume Modifications	1	LS	60,000	60,000

7	PI Filter System Meter/Telemetry/Misc	1	LS	70,000	70,000
	Grove Creek Upgrades				
8	Stream Diversion Modifications	1	LS	175,000	175,000
9	PI Screen/Strainer Modifications	1	LS	55,000	55,000
10	PI Filter System Meter/Telemetry/Misc	1	LS	70,000	70,000
				Construction Cost	**$1,890,000**
				Contingency	$280,000
				Design & Construction Engineering	280,000
				Legal, Bonding and Administrative	50,000
				TOTAL	**$2,500,000**

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board of Water Resources	$1,800,000	72.0%
Applicant	700,000	28.0
TOTAL	**$2,500,000**	**100%**

Staff recommends the board authorize 72.0% of the project cost, up to $1,800,000, and that the bonded indebtedness be returned at 1.0% interest over 25 years with annual payments of approximately $95,000 (including reserves).

Economic Feasibility

Due to the nature of the project, the alternatives to the proposed project are to do nothing or to build a more expensive treatment facility. The financial benefits for the city are minimal outside of reduced staff time to clean the system. Additionally, the City Council has directed the City Engineer to upgrade the screening/filtering system to improve the current conditions. Thus, the benefit/cost ratio is 1.0.

Financial Feasibility

According to the 2017 list of the Median Adjusted Gross Income (MAGI) for cities, the MAGI for Pleasant Grove is just over $48,000. According to the Board's affordability guideline for funding, the minimum cost of water is 1.40% of the MAGI. The minimum cost of water per connection for Pleasant Grove is about $672 annually or $56.00 monthly.

As can be seen in the following table, the city's average monthly cost per residential connection for water is over the Board's affordability guideline. Thus, the city can be given a reduced interest rate for the proposed funding.

Water Cost	Annual Cost	Cost/Conn/Mo
Average Water Bill		$27.50
Average Secondary Water Bill or Assessment		36.10
Property Tax for Water		1.70
Proposed Board of Water Resources Funding	$95,000	0.95
TOTAL		**$66.26**

Water Rights & Supply

The water sources for the pressurized irrigation system come primarily from shares the city owns within the following list of entities:

- Pleasant Grove Irrigation Company
- North Union Irrigation Company
- Provo Reservoir Water Users Company
- Provo Bench Irrigation Company
- Central Utah Water Conservancy District (CUWCD)
- Provo River Water Users Association

The city also has water rights for wells that are used as needed to supplement the system during high use.

Easements

The project will be completed within existing easements owned by the city or through agreement with CUWCD. No additional easements will be needed to complete the project.

Environmental

Existing dirt or paved roads will be used to access the different locations for the project. No new access roads will be needed to complete the project. The project is expected to reduce the amount of sediment that settles on customers lawns and gardens.

Water Conservation

No measurable water conservation is expected from completion of the project.

Applicant's Responsibilities

The applicant will be required to make all arrangements to sell the board a non-voted revenue bond, as well as verify it has adequate water rights and rights-of-way to construct the project. If the project is authorized, a full list of requirements and procedures necessary to close the bond will be furnished to the applicant.

BOARD OF WATER RESOURCES

Committal of Funds

Applicant: **Mapleton Irrigation Company**

Project Number: RE418

Fund: Revolving Construction Fund

Total Cost: $1,625,000

Application Received: 10/24/2018

Authorized: 3/20/2019

Board Meeting Date: 10/10/2019

Board Member: Wayne Andersen

Project Manager: Marisa Egbert

Project Summary: The purpose of the project is to replace approximately three miles of existing canal, pipe, and box culverts with new 24-inch, non-pressurized HDPE pipe. Where possible, existing pipes will be slip-lined. The project will include new inlet and outlet structures, as well as turnouts and a traveling screen.

Recommendation: Staff recommends the board commit 61.5% of the project cost, up to $1,000,000, and that the project be purchased at 0% interest over approximately 22 years, with annual payments of $45,700.

Project Contacts:

President:
Mike Miner
1290 W. 1600 S.
Mapleton, UT 84664
801-376-1454

Secretary:
Patti Andreasen
PO Box 924
Springville, UT 84663
801-491-6264

Engineer:
Barry Prettyman
Franson Civil Engineers
1276 South 820 East, Suite 100
American Fork, UT 84003
801-756-0309

Location

The proposed project is located on the east of Mapleton in Utah County.

Project Summary

The purpose of the project is to replace approximately three miles of existing canal, pipe, and box culverts with new 24-inch, non-pressurized HDPE pipe. The project will include new inlet and outlet structures, as well as turnouts and a traveling screen.

Cost Estimate & Sharing

As the company has begun design of the project, additional shareholders have expressed interest in connecting to the pressurized system. Due to these design changes, approximately 1,000 additional feet of the 24" pipe are included in the design. The construction and engineering cost estimate has increased by $194,000. The board's cost share would increase by just under $40,000.

The authorized and proposed cost estimate and sharing are as follows:

Agency	Authorized Cost Sharing	% of Total	Proposed Cost Sharing	% of Total
Board of Water Resources	$961,350	67.2%	$1,000,000	61.5%
WaterSMART Grant	300,000	21.0	300,000	18.5
Applicant	169,650	11.8	325,000	20.0
TOTAL	**$1,431,000**	**100%**	**$1,625,000**	**100%**

Repayment

Staff recommends the board commit 61.5% of the project cost, up to $1,000,000, and that the project be purchased at 0% interest over approximately 22 years, with annual payments of $45,700.

BOARD OF WATER RESOURCES

Committal of Funds

Applicant: **West Cache Irrigation Company**

Project Number: RE421

Fund: Conservation and Development Fund

Total Cost: $3,500,000

Application Received: 12/17/2018

Authorized: 1/31/2019

Board Meeting Date: 10/10/2019

Board Member: Charles Holmgren

Project Manager: Russell Hadley

Project Summary: The purpose of the project is to replace 5.3 miles of the West Cache Irrigation Ditch with pressurized pipe, construct two pump stations, install four flow meters, and other appurtenances.

Recommendation: Staff recommends the board commit 51% of the project cost, up to $1,785,000, and that the project be purchased at 1% interest over approximately 25 years, with annual payments of $81,100.

Project Contacts:

President:
Sid Munk
2598 W. 5900 N
Amalga, UT 84335
435-881-1348

Secretary:
Ed Cottle
1207 S. 400 E.
Trenton, UT 84338
435-764-9910

Engineer:
Scott Archibald - Sunrise Engineering
26 South Main Street
Smithfield, UT 84335
435-563-3734

Location

The proposed project is located in between the towns of Trenton and Newton in Cache County.

Project Summary

It is estimated that almost 1/3 of the applicant's water is lost to seepage and weed growth in the earthen West Cache Ditch. The purpose of the project is to replace 5.3 miles of the West Cache Irrigation Ditch with pressurized pipe, construct two pump stations, and install four new flow meters and other appurtenances. Since the project was authorized in January of 2019, the applicant has obtained an additional $400,000 WaterSmart Grant.

Cost Estimate & Sharing

The cost estimate remains as authorized. However, the additional $400,000 WaterSmart Grant reduces the Board and applicant's cost sharing as follows:

Agency	Authorized Cost Sharing	% of Total	Proposed Cost Sharing	% of Total
Board of Water Resources	$2,125,000	60.7%	$1,785,000	51%
WaterSmart Grant	1,000,000	28.6	1,400,000	40
Applicant	375,000	10.7	315,000	9
TOTAL	**$3,500,000**	**100%**	**$3,500,000**	**100%**

Repayment

The board previously authorized 60.7% of the project cost, up to $2,125,000, and that the project be purchased at 1% interest over approximately 25 years, with annual payments of $100,000.

With the additional WaterSmart Grant included, staff recommends the board commit 51% of the project cost, up to $1,785,000, and that the project be purchased at 1% interest over approximately 25 years, with annual payments of $81,100.

BOARD OF WATER RESOURCES

Special Item - Feasibility and Committal of Funds

Applicant: **Cove Water Works Company**

Project Number: RE429

Fund: Revolving Construction Fund

Cost Estimate: $250,000

Application Received: 5/31/2019

Board Meeting Date: 10/10/2019

Board Member: Charles Holmgren

Project Manager: Tom Cox

Project Summary: The purpose of the project is to make improvements to Atkins Spring to meet Division of Drinking Water requirements. Existing 2-inch galvanized steel transmission pipeline will be replaced with 4-inch PVC pipe. A section of undersized distribution pipeline will be replaced with 2-inch PVC pipe.

Recommendation: Staff recommends the board authorize and commit 85% of the project cost, up to $212,500, and that the project be purchased at 0% interest over 30 years with annual payments of approximately $7,100.

Project Contacts:

President:
Robert Carriedo
12686 N. 1200 E.
Cove, UT 84320
435-232-5540

Secretary:
Randy Larsen
1290 E. 12600 N.
Cove, UT 84320
435-232-9374

Engineer:
Franson Civil Engineers
1276 South 820 East, Ste 100
American Fork, UT 84003
801-756-0309

Location

The proposed project is located in Cove in Cache County.

Introduction & Background

Cove Water Works Company provides culinary water to 24 residences and a church in the community of Cove in northern Cache County. The company is limited to 28 connections with the remaining three not being currently used. The company began providing water in the late 1800's; however, its license is currently lapsed with the Department of Commerce. Two other small water companies also provide culinary water to the area.

The applicant obtains its water from Atkins Spring, a well and also a small amount from another spring which is delivered to Cove's system through Lewiston Town's transmission pipeline. The well was funded with Water Resources' monies in 2009 and the final payment will be made the end of this year. The system was installed in the 1950's and includes a 20,000 gallon tank located near Atkins Spring. The system primarily consists of 2-inch galvanized steel pipe with the exception of a section of 4" PVC pipe recently installed by the applicant. Distribution lines to some homes are only ¾-inch in diameter.

Existing Conditions & Problems

During the spring, water from Atkins Spring sometimes becomes turbid, which indicates a possible influence from surface water. The Division of Drinking Water has indicated the applicant must either make improvements to the spring, build a treatment facility for the water, or abandon the spring as a drinking water source. Drinking Water is also requiring the applicant to create a source protection plan for the spring area.

The two-inch pipe is increasingly leaking and is at the end of its useful life.

Proposed Project

The applicant is seeking financial assistance from the board to make improvements to Atkins Spring that include installing new collection pipes and impervious liner above the collection area. The remainder of the 2"inch transmission pipe will be replaced with approximately 5,600 feet of 4" PVC and about 900 feet of 2" PVC distribution pipeline will be installed.

Benefits

The proposed project will improve Atkins Springs to meet Division of Drinking Water requirements. Replacing the 2-inch pipeline will increase system capacity and eliminate future repairs to the aging system.

Cost Estimate

The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	Spring Improvements	1	LS	$75,000	$75,000
2	4-inch PVC Pipe	5,570	LF	8.00	44,560
3	Fittings/Valves	1	LS	5,000	5,000
4	Road Crossings	1	LS	40,000	40,000
5	4-inch Meter	1	EA	5,000	5,000
6	2-inch PVC Pipe	920	LF	7.00	6,440
7	Connections	5	EA	1,200	6,000
				Construction Cost	**$182,000**
				Contingency	18,000
				Design & Construction Engineering	40,000
				Legal and Administrative	10,000

TOTAL	**$250,000**

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board of Water Resources	$212,500	85%
Applicant	37,500	15
TOTAL	**$250,000**	**100%**

Staff recommends the board authorize and commit 85% of the project cost, up to $212,500, and that the project be purchased at 0% interest over 30 years with annual payments of approximately $7,100.

Financial Feasibility

Based on the board's water service affordability guideline, Cove residents should pay up to $61.59 monthly for water. The cost of all water, based on the 25 active connections on the system, is as follows:

Water Cost	Annual Cost	Cost/Conn/Mo
Average Culinary Water Bill	$10,200	$34.00
Average Irrigation Water Assessment	1,875	6.25
Proposed Board of Water Resources Loan	7,100	23.67
TOTAL	**$19,175**	**$63.92**

Residences are assessed $400 annually. Irrigation water is supplied by a different company and residents typically pay about $75 per year.

Water Rights & Supply

Water rights related to this project are as follows:

Water Right Number	Flow / Volume (cfs / ac-ft)
25-10223	1.0 cfs
25-10224	1.0 cfs
25-10225	1.0 cfs
25-5040	0.123 cfs
25-5225	0.043 cfs
25-8661	0.5 cfs

All but the last water right listed are in the name of the board from the previous project.

Easements

The applicant owns the current Atkins Spring collection area and tank site. It is anticipated that as the collection lines are replaced, that they may be extended to follow the water, thus necessitating an expansion of the current easement. The pipeline will follow existing alignments.

Environmental

No long term environmental impacts are foreseen due to the proposed project.

Water Conservation

No water will be conserved with the proposed project. The applicant will be required to update its water management and conservation plan.

Applicant's Responsibilities

If the board authorizes the proposed project, the applicant must do the following before a purchase agreement can be executed:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Pass a resolution by the appropriate majority (as defined in the company's Articles of Incorporation and Bylaws) authorizing its officers to do the following:
    a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
    b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.
3. Have an attorney give the Board of Water Resources a written legal opinion that:
    a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
    b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.
    c. The company has obtained all permits required for the project.
    d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the Board.
    e. The company's water rights applicable to the project are unencumbered and legally transferable to the Board of Water Resources, and that they cover the land to be served by the project.
4. Update its water conservation plan for its service area, and obtain approval of it from the Division of Water Resources.
5. Obtain approval of final plans and specifications from the Division of Water Resources and Division of Drinking Water.

BOARD OF WATER RESOURCES

Special Item – Reauthorization & Committal Report

Burns Bench Irrigation Company

Applicant: Burns Bench Irrigation Company

Project Number: RE395

Fund: Revolving Construction Fund

Cost Estimate: $667,000

Application Received: 3/23/2017

Authorized: 6/22/2017

Board Meeting Date: 10/10/2019

Board Member: Randy Crozier

Project Manager: Jaqueline Pacheco

Project Summary: The purpose of the project is to install a radial gate at the diversion structure. Additionally, 1,300 feet of 42-inch HDPE pipe and 1,700 feet of 24-inch HPDE pipe will be installed to enclose the existing canal and eliminate the earthen pond.

Recommendation: Staff recommends the board authorize and commit 28.3% of the project cost, up to $189,000, and that the project be purchased at 0% interest over 20 years with annual payments of approximately $9,450.

Project Contacts:

President:	Secretary:	Engineer:
Monty Pratt P.O. Box 392 Jensen, UT 84035 435-790-2708	Ilene Fedelleck P.O. Box 6 Jensen, UT 84035 435-789-3714	Chris Thomsen, P.E. CIVCO Engineering P.O. Box 1758 Vernal, UT 84078 435-823-8022

Location
The proposed project is located five miles northwest of Jensen in Uintah County.

Introduction & Background
The Burns Bench Irrigation Company was registered with the State of Utah in 1936, and provides irrigation water for agricultural use from Brush Creek. There are currently 306 shares distributed among 25 shareholders. The applicant has previously received financial assistance from the board in 1960 and 1961.

The Burton Ditch Irrigation Company and the Murray Ditch Pipeline Inc. are current users of the existing system with water from Ashley Creek and will be working directly with the Burns Bench Irrigation Company to pay for their portion of the project. The project ownership distribution is 57.48%, 25.28%, and 17.24% for Burns Bench Irrigation Company, Burton Ditch Company, and the Murray Ditch Pipeline Inc. company, respectively. Water from Red Fleet Reservoir, constructed in the early 1980s, supplements the three companies.

The three irrigation companies worked with the Bureau of Reclamation in 2000 to pipe some of the main canals that allow the Bureau to deliver 1,800 acre-feet of water to Stewart Lake. The companies' water rights are comprised of their primary shares from their original water right and a share from the supplemental water from Red Fleet Reservoir allowing all of the land owners to divert 3.8 acre-feet per acre. The applicant's current distribution system primarily consists of an inlet structure, a settling basin, an open earth canal prior to connecting to the pressurized irrigation system.

Existing Conditions & Problems
The applicant's current inlet structure does not adequately remove sediment before it enters the pressurized irrigation system. The sediment settles in the pipes and wheel lines leading to high maintenance costs and an increase of water that is needed to flush the wheel lines.

Proposed Project
The purpose of the project is to install a radial gate at the diversion structure to allow regular flushing of sediment away from the intake. Additionally, 1,300 feet of 42-inch HDPE pipe and 1,700 feet of 24-inch HPDE pipe will be installed to enclose the existing canal and eliminate the earthen pond.

The project fits in Prioritization Category 3 (agricultural water projects that provide a significant economic benefit for the local area).

Benefits
The proposed project will reduce maintenance and on-farm costs, reduce the amount of sediment entering the system, and conserve approximately 232 acre-feet of water annually.

Cost Estimate
The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:

Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization	1	EA	$50,000	$50,000
2	Clearing & Grubbing	3	AC	1,300	3,900
3	Strip, Stockpile, and Spread Topsoil	30	CY	20	600
4	Excavation	2,250	CY	6	13,500
5	Fill	1,000	CY	9	9,000
6	Dam and Bypass	1	LS	10,000	10,000
7	Rip Rap	50	CY	102	5,100
8	Concrete Walls	155	CY	450	69,750
9	Concrete Floor	80	CY	350	28,000
10	Walk Way	1	LS	2,500	2,500
11	Radial Gate	1	EA	58,000	58,000
12	Power	1	LS	2,100	2,100
13	42-inch Pipe	1,300	LF	120	156,000
14	24-inch Pipe	1,700	LF	45	76,500
15	Connect to Existing Pipe	1	LS	3,450	3,450
15	Granular Borrow	300	CY	42	12,600
				Construction Cost	**$501,000**
				Contingency	$50,000
				Design & Construction Engineering	78,000
				Legal and Administrative	8,000
				Permits, Fees & Testing	30,000
				TOTAL	**$667,000**

Cost Sharing & Repayment

The recommended cost sharing and repayment are:

Agency	Cost Sharing	% of Total
Board of Water Resources	$189,000	28.3%
WaterSMART Grant	300,000	45.0
UDAF Conservation Grant	80,000	12.0
Uintah Water Conservancy District Grant	65,000	9.7
Applicant	33,000	5.0
TOTAL	**$667,000**	**100%**

The applicant has secured $445,000 in grants from the Bureau of Reclamation, Utah Department of Agriculture and Food, and the Uintah Water Conservancy District.

Staff recommends the board authorize and commit 28.3% of the project cost, up to $189,000, and that the project be purchased at 0% interest over 20 years with annual payments of approximately $9,450.

Financial Feasibility

Benefits of the project include increased water conservation, increased river flows, and reduction in operation and maintenance costs. The primary purpose of the project is to reduce sediment from entering the pressurized irrigation system.

The project ownership distribution is 57.48%, 25.28%, and 17.24% for Burns Bench Irrigation Company, Burton Ditch Company, and the Murray Ditch Pipeline Inc., respectively. Burns Bench Irrigation Company is comprised of 306 shares distributed among 25 shareholders. One share is equivalent to 12 acre-feet with a $50.00 annual assessment cost per share. The Burton Ditch Company consists of 550 shares distributed among 6 shareholders where one share is equivalent to 3.7 acre-feet. Their current annual assessment cost per share is $6.20. The Murray Ditch Pipeline Inc. company consists of 350 shares distributed among 17 shareholders where one share is equivalent to 3.7 acre-feet. Their current annual assessment cost per share is $2.41.

The applicant stated that the applicant cost share of $33,000 will covered by one-time increase assessment per share. Based on the project cost distribution among the three companies, Burns Bench Irrigation Company, Burton Ditch Company, and Murray Ditch Pipeline Inc.'s portions for the project cost share approximately $19,000 ($61.99/share), $8,300 ($15.17/share), and $5,700 ($16.25/share), respectively.

Staff recommends a repayment term of 20 years at 0% interest, which would result in annual payments of approximately $9,500. This results in an annual cost of approximately $5,460 ($17.85/share) for Burns Bench Irrigation Company, $2,401 ($4.37/share) for Burton Ditch Company, and $1,640 ($4.68/share) for Murray Ditch Pipeline Inc.

Water Rights & Supply

Water rights related to this project are as follows:

Company	Water Right Number	Flow (cfs)
Burns Bench Irrigation Company	45-336	10.0
Burton Ditch Irrigation Company	45-46	13.69
Murray Ditch Pipeline Inc.	45-3430	1.0
Murray Ditch Pipeline Inc.	45-41	2.167
Murray Ditch Pipeline Inc.	45-42	3.326
Murray Ditch Pipeline Inc.	45-43	1.218
Murray Ditch Pipeline Inc.	45-45	1.167

Easements

The proposed project will be contained within the existing right-of-way.

Environmental

The proposed project is not expected to have any detrimental effects on the environment beyond the usual dust and noise of the construction phase.

Water Conservation

The applicant estimates that the proposed project will conserve approximately 232 acre-feet of water annually.

Applicant's Responsibilities

If the board authorizes the proposed project, the applicant must do the following before a purchase agreement can be executed:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
2. Execute a service agreement with Burton Ditch Company and Murray Pipeline Inc. governing the water rights, and the operation, maintenance, and funding aspects of the project. Obtain majority shareholder approval from each entity for participation in the project.
3. Pass a resolution by the appropriate majority (as defined in the company's Articles of Incorporation and Bylaws) authorizing its officers to do the following:
    a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
    b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.
4. Have an attorney give the Board of Water Resources a written legal opinion that:
    a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
    b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.
    c. The company has obtained all permits required for the project.
    d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the Board.
    e. The company's water rights applicable to the project are unencumbered and legally transferable to the Board of Water Resources, and that they cover the land to be irrigated by the project.
    f. The company is in compliance with sections 73-10-33, 10-9a-211, and 17-27a-211 of the Utah Code governing management plans for water conveyance facilities.
5. Submit a water conservation plan for its service area, and obtain approval of it from the Division of Water Resources.
6. Obtain approval of final plans and specifications from the Division of Water Resources.
7. Obtain letters from all outside financing agencies establishing their commitment of funds to the project.

BOARD OF WATER RESOURCES

Special Item – Delay of Payment

Applicant:	**Summit Creek Irrigation & Canal Company**
Project Number:	RE308
Fund:	Conservation and Development Fund
Application Received:	2/8/2012
Authorized:	3/14/2012
Committed:	3/14/2012
Board Meeting Date:	10/10/2019
Board Member:	Wayne Andersen
Project Manager:	Ben Marett
Summary:	The Summit Creek Dam No. 1 has to be breached. The costs associated with this breach and flood mitigation pose a hardship to the applicant.
Recommendation:	Staff recommends the board amend the purchase agreement to delay principal payments by one year with an interest-only payment due in 2019. Regular payments will resume in 2020.

Project Contacts:

President:
Philip B. Rowley
901 S. 300 W.
Santaquin, UT 84655
801-318-8257

Secretary:
Tod Rowley
901 S. 300 W.
Santaquin, UT 84655
801-368-0522

Location

The proposed project is located in and around Santaquin in Utah County.

Project Summary

In 1984 Summit Creek Dam No. 1 was breached due to structural concerns. This dam was used for flood routing and flood control. The applicant repaired the breach on Summit Creek No. 1 in 2012 with funding assistance from the Board of Water Resources. Because of drought, the dam was not put into use until this year (spring 2019). Soon after the reservoir was filled to attenuate spring runoff, it became apparent that the old sections of the dam were faulty. Leaks were too numerous to count and damaging erosion quickly ensued.

In an effort to prevent complete dam failure, the applicant dug a temporary channel around the dam to divert flow. Unfortunately, water in the channel percolated into the ground and resurfaced at the dam exacerbating erosion. Subsequently, the applicant cut off flow to the channel and employed the use of multiple pumps to lower the surface elevation of the reservoir and to slow down erosion. Ultimately, the applicant was ordered to breach the dam by the Division of Water Rights Dam Safety Section.

Earth work, equipment rental, fuel, and other costs associated with breaching the dam and preventing catastrophic failure amount to over $70,000. This unexpected expense and the loss of Summit Creek Dam No. 1 are major financial burdens to the applicant.

Modification of Terms

The original terms of the project purchase agreement were $2,090,000 over 25 years at an interest rate of 2.5% with an annual payment of $95,000. An interest only payment in 2019 would amount to approximately $40,000.

Staff recommends the board amend the purchase agreement to delay principal payments by one year with an interest-only payment due in 2019. Regular payments will resume in 2020.

BOARD OF WATER RESOURCES

Special Item - Withdrawal Report

Applicant: **Mosby Irrigation Company**

Project Number: RE374

Fund: Revolving Construction Fund

Application Received: 7/30/2015

Board Meeting Date: 10/10/2019

Project Manager: Tom Cox

Project Contacts:

President:
Chris Walker
PO Box 217
Lapoint, UT 84039
435-823-6403

Location

The proposed project is located north and east of LaPoint in Uintah County.

Summary

In July 2015 the applicant requested financial assistance from the board to pipe its canal from Red Wash dam through its service area in conjunction with Whiterocks Irrigation Company which was planning on piping some of its canal also and had submitted a funding application to the board at the same time. It was decided that Whiterocks Irrigation would sponsor the whole project which has been built.

Staff therefore recommends the application be withdrawn from further consideration by the board.

BOARD OF WATER RESOURCES

Application Summary

Applicant: **Millville City**

Project Number: RL587

Fund: Cities Water Loan Fund

Cost Estimate: $2,026,000

Application Received: 9/5/2019

Board Meeting Date: 10/10/2019

Board Member: Charles Holmgren

Project Manager: Jaqueline Pacheco

Project Contacts:

Mayor:
David Hair
510 E. 300 S.
Millville, UT 84326
435-753-4547

Secondary Contact:
Corey Twedt, Finance Dir.
510 E. 300 S.
Millville, UT 84326
435-881-2669

Engineer:
Max Pierce, CRS Engineers
2 N. Main St.
Providence, UT 84078
435-781-2550

Location

The proposed project is located in Millville City in Cache County.

Proposed Project

The applicant is requesting financial assistance from the board to construct a new drinking water well.

Water Rights

- 25-5171